

In the Specification

On page 1, after the title, please replace the first section title and first paragraph with the following:

BACKGROUND OF THE INVENTION

1. Technical Field of the Invention

~~The present invention~~ This disclosure relates to organic EL devices which are able to convert electrical energy into light, and which have various applications in devices such as display devices, flat panel displays, backlights, illuminations, interior decorations, signboards, electronic cameras, timepieces, etc. More specifically, ~~the present invention~~ it relates to an integrated mask in which a plurality of deposition masks used for manufacturing the organic EL devices are arranged, and to a method and apparatus for fabricating the integrated mask. In addition, the ~~present invention~~ disclosure also relates to a method and apparatus for manufacturing an organic EL device using the integrated mask.

On page 3, please replace the last paragraph with the following:

Accordingly, ~~an object of the present invention is~~ it could be helpful to provide have a construction for practically using an integrated mask in which a plurality of deposition masks, each of which has an array of apertures corresponding to an organic EL device, are arranged. In addition, ~~it is also an object of the present invention~~ could be helpful to provide have a means for fabricating the integrated mask in such a manner that the deposition masks are accurately positioned in the integrated mask. In addition, ~~another object of the present invention is~~ it could further be helpful to provide have a method and apparatus for manufacturing an organic EL device by which the integrated mask and a substrate can be accurately positioned, multiple organic EL devices can be formed on a single substrate by a deposition process, and the productivity in manufacturing organic EL devices can be significantly increased. Furthermore, ~~it is also an object of the present invention~~ could be helpful to provide have a high-quality, inexpensive organic EL device.

On page 4, please replace the first section title and first paragraph with the following:
SUMMARY OF THE INVENTION

~~According to the present invention,~~ an An integrated mask includes a plurality of deposition masks, each deposition mask having an array of deposition apertures formed in accordance with a deposition pattern; and a base plate having a plurality of openings on which the deposition masks are arranged. The deposition masks are retained to the base plate by engaging units in a disengageable manner, and alignment marks used for positioning the deposition masks on the base plate are formed on the base plate. The area of each of the openings formed in the base plate is larger than the area of the array of deposition apertures formed in each of the deposition masks. Preferably, the engaging unit is able to disengage the deposition masks when an external force is applied. For example, each of the engaging units may be constructed of a spring and a member which transmits the spring force. When the external force is not applied, the deposition masks are fixed by the spring force, and when the external force is applied, the member removes the spring force applied to the deposition masks.

Please replace the paragraph spanning pages 4 and 5 with the following:

~~In addition, according to the present invention,~~ a fabrication apparatus for the integrated mask includes a table which supports the base plate; a deposition mask retaining-and-moving unit which retains the deposition masks and freely moves the deposition masks relative to the base plate; a positioning system which detects the alignment marks or reference positions of the base plate and the deposition masks and adjusts the relative position between the base plate and the deposition masks using the deposition mask retaining-and-moving unit; and disengaging units which disengage the deposition masks and the base plate by applying an external force on the engaging units.

On page 5, please replace the first full paragraph with the following:

~~In addition, according to the present invention,~~ a fabricating method for the integrated mask includes the steps of supporting the base plate, on which the deposition masks are placed, on a table; detecting the alignment marks or reference positions of the base plate and the deposition masks by means of, for example, an image processing using a CCD camera; and adjusting the relative position between the base plate and the deposition masks by retaining and

moving the deposition masks relative to the base plate; and fixing the deposition masks on the base plate using the engaging units after the step of adjusting the relative position.

Please replace the paragraph spanning pages 5 and 6 with the following:

In addition, ~~according to the present invention,~~ an organic EL device manufacturing method includes the steps of positioning the integrated mask of the present invention and a substrate to be subjected to a deposition process in a deposition chamber using the alignment marks of the integrated mask; and patterning a thin film layer in the deposition process using the integrated mask, thereby forming organic EL devices. The step of positioning the integrated mask and the substrate may be performed outside the deposition chamber, and the integrated mask and the substrate may be transferred into the deposition chamber after the positioning process. Thus, the positioning process may be performed at a suitable place in accordance with the arrangement or construction of the apparatus, and the place at which the positioning process is performed not limited ~~in the present invention~~ as long as the positioning process is performed. In addition, the integrated mask ~~of the present invention~~ is preferably applied for forming R, G, and B emitting layers.

On page 6, please replace the last full paragraph with the following:

In the integrated mask ~~of the present invention,~~ a plurality of deposition masks, each of which having an array of deposition apertures, are arranged using the reference marks of the integrated mask and the deposition masks, and are retained to the base plate by engaging units in a disengageable manner. Accordingly, multiple deposition masks can be disposed at predetermined positions with high accuracy.

Please replace the paragraph spanning pages 6 and 7 with the following:

In addition, in the method and apparatus for fabricating the integrated mask ~~of the present invention,~~ the position of the base plate and the positions of the deposition masks are detected, and the relative positions between the base plate and the deposition masks are adjusted using the detection result. Accordingly, an integrated mask having a high accuracy can be fabricated.

On page 7, please replace the first full paragraph with the following:

In addition, in the method and apparatus for manufacturing the organic EL device ~~of the present invention~~, the step of positioning the integrated mask and the substrate and the step of forming a thin film layer, for example, an emitting layer, are performed using the above-described integrated mask having a high accuracy. Accordingly, a thin film layer can be formed in a predetermined pattern having high dimensional accuracy, irrespective of the size of the substrate on which the thin film layer is formed. In addition, since multiple organic EL devices can be formed on a single substrate at high accuracy, high quality organic EL devices can be manufactured with high productivity.

Please replace the paragraph spanning pages 7 through 8 with the following:

Fig. 1 is a perspective view showing an overall construction of an embodiment of an integrated mask ~~according to the present invention~~;

Fig. 2 is an exploded perspective view of the integrated mask shown in Fig. 1;

Fig. 3 is a perspective view showing an overall construction of another embodiment of an integrated mask ~~according to the present invention~~;

Fig. 4 is an exploded perspective view of the integrated mask shown in Fig. 3;

Fig. 5 is a sectional view showing an embodiment of an integrated mask fabrication apparatus ~~according to the present invention~~;

Fig. 6 is a sectional view showing another embodiment of an integrated mask fabrication apparatus ~~according to the present invention~~;

Fig. 7 is a sectional view showing another embodiment of an integrated mask fabrication apparatus ~~according to the present invention~~;

Figs. 8A and 8B are sectional views showing an embodiment of a deposition apparatus using an integrated mask ~~according to the present invention~~;

Figs. 9A to 9C are sectional views showing another embodiment of a deposition apparatus using an integrated mask ~~according to the present invention~~;

Fig. 10 is a perspective view showing an example of a pattern of ITO transparent electrodes; and

Fig. 11 is a diagram perspective view showing an example of a deposition mask.

On page 8, please replace the section title and the last full paragraph with the following:

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Preferred embodiments ~~of the present invention~~ will be described below with reference to the accompanying drawings.

Please replace the paragraph spanning pages 8 and 9 with the following:

Fig. 1 is a perspective view showing an overall construction of an embodiment of an integrated mask ~~according to the present invention~~, and Fig. 2 is an exploded perspective view of the integrated mask shown in Fig. 1. In addition, Fig. 3 is a perspective view showing an overall construction of another embodiment of an integrated mask according to the present invention, and Fig. 4 is an exploded perspective view of the integrated mask shown in Fig. 3.

On page 15, please replace the first full paragraph with the following:

Fig. 5 is a sectional view showing an embodiment of an integrated mask fabrication apparatus ~~of the present invention~~. In addition, Fig. 6 is a sectional view showing another embodiment of the integrated mask fabrication apparatus ~~of the present invention~~, and Fig. 7 is a sectional view showing still another embodiment of the integrated mask fabrication apparatus ~~of the present invention~~.

On page 19, please replace the first full paragraph with the following:

Next, with reference to Fig. 6, another embodiment of an integrated mask fabrication apparatus ~~of the present invention~~ will be described below.

Please replace the paragraph spanning pages 22 and 23 with the following:

Next, with reference to Fig. 7, still another embodiment of an integrated mask fabrication apparatus ~~of the present invention~~ will be described below.

On page 36, please replace the second full paragraph with the following:

The ~~present invention~~ apparatus and methods will now be described by way of Examples. It should be noted, however, that the ~~invention~~ apparatus and methods defined in the appended claims is not restricted to the Examples below.